



Maintain Healthy Watersheds GIT Meeting
April 11, 2022

[Meeting Materials](#)

Jeff Lerner, EPA
Jason Dubow, MDP
Timothy Craddock, WVDEP
Todd Janeski, VCU
Scott Heidel, PA DEP
Angel Valdez, MDE
Kara Ogburn, MDE
Scott Stranko, MD DNR
Iris Allen, MD DNR
Alison Santoro, MD DNR
Jen Walls, DNREC

Bhanu Paudel, DNREC
Sally Claggett, USFS
Katie Brownson, USFS
Scott Phillips, USGS
Katheryn Barnhart, EPA
Jennifer Starr, ACB
Laura Cattell Noll, ACB
Kyle Mclemore, Upper Mattaponi Indian Tribe
Camille Liebnitzky, City of Alexandria
Justin Shapiro, GIT 1
Katlyn Fuentes, GIT 2

Report Out on CBP Showcase with Region 3 Federally Recognized Tribes and Update on HWGIT Funding Projects - Renee Thompson, USGS

Renee opened her presentation with congratulations to Jeff Lerner as he has taken on a new role as Partnerships Program Branch Chief within EPA's Office of Wetlands Oceans and Watersheds. She also gave congratulations and many thanks to Lee Epstein as he will be retiring from the CBF at the end of the month after 30 years.

Renee gave a report out on a showcase to initiate discussions with the Region III federally recognized tribes on opportunities for increased engagement with the Chesapeake Bay Program partnership. There were listening and informal sessions that highlighted partnership priorities and initiatives under the 2014 Bay agreement and identified next steps for increased engagement. Renee presented on behalf of the HWGIT. Goal teams' goal and outcome were presented and noted that it is important to ground people and remind folks of our vision. Not only if the HWGIT is working towards sustaining 100% of the healthy watersheds but are also focusing on trying to increase that number of healthy watersheds.

- *Goal: Sustain state identified healthy waters and watersheds recognized for their high quality and/or high ecological value*
- *Outcome: 100 percent of state-identified healthy waters and watersheds remain healthy*
- *Vision: Sustain watershed health where it is high, exceptional and/or outstanding... to increase the number of healthy watersheds in the future... Provide the forum for mutual shared learning... Develop information resources... and promote the science.*

Renee provided folks with the outcome summary of the HWGIT and noted that HWGIT outcome is classified as uncertain as we are still developing methodology to be able to track whether the goal team is sustaining healthy waters and watersheds. The Goal Team has done a great job of compiling resources and doing work related to policy incentives and planning tools. There is still work to be done and having the High-resolution land use/land cover data will be helpful for tracking healthy waters and watersheds.

It was then showed where all the tribal lands are in the watershed. The only federally recognized tribes are in VA. Using spatial tools Tribes can look at historic and existing lands and which are most pristine and intact, and that could potentially lead to tribal leaders doing targeted land acquisitions. The Bay program has an opportunity to work with tribes and tribal leaders to investigate doing things like land acquisitions based off areas with high value habitat or other watershed metrics. Kyle McLemore an environmental technician from the Upper Mattaponi Indian Tribe has joined the HWGIT and is testament to the fact that there are tribes out there who are interested and invested to this partnership. CBP Deputy Director Martha Shimkin followed up with Renee and noted about how she was really excited by the opportunity to increase engagement with non-traditional partners at the Bay Program. The next steps are not clear, and Renee asked Kyle if he had any thoughts or takeaways from the meetings. The tribes showed great interest in mapping and assessment tools. They also were interested in understanding the threats. The fishery folks had great conversations about the want to increase access and improve recreational fishing as well as some restoration and aquaculture.

Discussion

Jeff Lerner: This is topic is not only about the lands that tribes are currently working on in terms of stewardship, but also thinking about the traditional and historic lands and what kind of connections can we make with our current understanding of land use and the impacts that has on watersheds.

Kyle Mclemore: Tribes are really looking forward to being included in decisions and restoring traditional land uses such as agriculture and recreational activities. Regarding land acquisitions, it is something that is happening across America, but it is a slow-moving process. I will keep everyone in the loop about spreading information. We are just happy that we have started to see progress and that tribes are being included in talks.

GIT Funding:

Renee gave a small update on the GIT funding projects that the goal team is sponsoring and supporting. 2023 projects will be kicking off later this summer, HWGIT has the opportunity to think strategically about filling some of our GITs science needs and gaps. Renee noted that she is overseeing two 2022 projects, so would love to see others in the work group step up and lead 2023 projects. For 2022 we are supporting Scope 1: Chesapeake Healthy Watershed Assessment 2.0 and Scope 10: Updating the Chesapeake Conservancy Partnership (CCP) Priority Habitat Dataset of the Chesapeake Conservation Atlas: A scoping project.

- Scope 1 will further improve, refine, and finalize the Chesapeake Healthy Watersheds Assessment. The CHWA 2.0 outcomes include updated metrics for all Chesapeake Healthy Watersheds Assessment data layers, improved visualization, analysis, and filtering functionality to meet user needs, computed change statistics for appropriate metrics related to land use and vulnerability metrics and user customized fact sheets including interpretation of results.
- Scope 10 will provide a scope of work describing various approaches and resources required for an updated, watershed-wide dataset of important habitat to guide land conservation and terrestrial and aquatic habitat conservation, restoration, and stewardship. This project will also provide recommendations related to data, methodology, process, and cost estimates for the creation of an updated habitat dataset for CCP. The outcome will lay the foundation for ecological assessment, ecosystem service valuation and metric development. RFP application deadline for GIT funding projects is on April 18th. Reviewing, deciding winners, and contract

writing will take place now until the end of May. The awards will be sent out on June 6th and contact work will be in the middle of June.

Updating State Identified Healthy Waters:

Renee and Sophie will be taking time this spring to meet with jurisdictions to revisit how each state defines their healthy watersheds. We want to meet with jurisdictional leads to make sure that the definition we have is correct and up to date and go over anything that needs to be refined. Our next steps are the following:

- Refine SIHW Definitions for each participating jurisdiction
- Update data as appropriate (GIS shapefiles)

To view the current State-identified healthy watersheds and the definitions visit the Chesapeake Progress site at: <https://www.chesapeakeprogress.com/clean-water/healthy-watersheds>

Action: Renee and Sophie will be reaching out to jurisdictional leads to discuss state definitions of healthy watersheds. If you have not found a time, please reach out to Sophie.

Planning for Clean Water Collaboration - *Laura Cattell Noll, Alliance for the Chesapeake Bay* and *Laura Bachle, Eastern Research Group, Inc. (ERG)*.

The Local Leadership Workgroup with the support of ERG has planned 6 webinars in Jan – June 2022 with the MidAtlantic Planning Collaboration, Three half-day workshops at American Planning Association (APA) State Chapter Conferences in 2022, and a session at National APA conference in 2023. Laura provided a review on how these efforts help support the HWGIT local engagement efforts related to understanding where healthy watersheds are and resources to help protect them.

The Local Leadership Workgroup (LLWG) was tasked with meeting the outcome of increasing the knowledge and capacity of local officials. They wanted to make sure that elected officials have baseline knowledge so that they can make the right decisions for their communities. LLWG got feedback from local officials and found that they heavily rely on their staff, particularly planners, within their networks. The LLWG had an ah ha moment and realized that because local leaders rely heavily on planners, they had the opportunity to educate planners with hopes of making an impact on local leaders. LLWG put together the GIT funding project which led to Planning for Clean Water Collaboration to create a webinar series to inform planners which in turn would help educate local leaders.

A stakeholder survey was given to planners to better understand what their priorities are, and what are at the top of their minds. A list was then generated of the top ten focus areas of planners. The main focuses of most planners were: the triple bottom line, co-benefits, and putting planners' thoughts first when it comes to land use. After the survey and interviews were done with planners the Mid Atlantic Planning Collaboration began meeting. The collaboration was able to offer online courses and webinar to planners so they could continue to get their continuing education credit during the pandemic. The planning for clean water webinar series sprang out of that need for continuing education credits in a world where meeting person was not able to happen. The series has been taking place since January and will be ending in June, and the topics are derived from the list of priorities for planners. The webinars include case studies, peer to peer learning, and are being led by planners from around the Chesapeake. The webinars are recorded, and you can watch them on [YouTube](#).

Both the VA and PA APA Chapters will have in person conferences/ walking tours and the planning for clean water folks will be there to present. The next steps include creating and sharing more webinars of interest, and hopefully presenting a capstone presentation at the National APA Conference.

Discussion

Scott Phillips: I know we would like to work with you guys to share some of the existing watershed wide tools and see how they could be applied more effectively for local governments. There are the decision makers, but we want to let them know there are some other pieces of information they could utilize to get multiple benefits that have been listed. I'd be happy to follow up with that with you guys.

Renee Thompson: [Helpful targeting tool information](#)

Jeff Lerner: You will not be able to protect all the land in a watershed, but you could be utilizing land use tools to help augment some of that protection work. You could also just have in place stream buffer protection, etc. Just looking at more of a holistic protection approach. The other opportunity that I see is that there has been quite a bit of green infrastructure planning that has been done within the bay watershed. One of my questions would be to what degree the planners understand about green infrastructure concepts and how those concepts can be integrated into master comprehensive planning?

Jason Dubow: Maryland local government guidance to protect healthy waters, integrate water resource-focused climate change adaptation into local comprehensive plans. See:

<https://planning.maryland.gov/Pages/OurWork/envr-planning/water-resources-mg/2022/2022-guidance-update.aspx> . How do we bridge the gap between discussion and integration in comprehensive plans so we can build on the success of the work presented today?

STAC Rising Temp Day 2 Workshop Overview and Relation to HWGIT – Katie Brownson, USFS and Renee Thompson, USGS Coordinator HWGIT

Katie reviewed the results of [day 2 of the workshop](#) which focused on 1) identifying and prioritizing near-term actionable management recommendations for the Bay Program partnership on options to address rising water temperatures effects on habitats and living resources and 2) identifying and prioritizing scientific information needs, including research, analyses, monitoring, and modeling, to enable the partners to take additional actions in the future. Renee shared some of the specific management recommendations that emerged from the workshop as related to HWGIT interests.

The workshop was broken into two groups: watershed and tidal. Katie focused on the watershed portion of the workshop. The watershed portion had findings which included opportunities to both mitigate and adapt rising water temperatures. The mitigation efforts focus on what can be done on the land to directly impact water temperatures or to minimize the extent to which heated run off is impacting waters. The adaptation approaches tend to be more focused on restoration management activities that can help minimize impacts for specific species or habitats. Water temperatures have been increasing in streams and rivers of the Chesapeake Bay watershed Source: even more than in the Bay's tidal waters.

Water temperatures are increasing to a larger extent than air temperatures within the same period. Air temp alone is most likely not the primary driver of change, things like land use also have an impact. The expectation is that the strongest negative impact will be on ecological systems. Both cold and warm water species will be impacted by extreme heat events. There is still more research that needs to be done when it comes to rising temps and ecology. Co-occurring stressors of higher temp will also be an issue. Policies that promote protection and maintenance of natural lands that provide cooling benefits are needed. Better understanding of the influence of BMPs and habitat restoration is needed, additional data and modeling capacity, and more research on stream temperature and living resources response to management are all gaps that need to be filled.

On Day 2 the topics for discussion were: Coldwater fisheries and habitats, rural waters and habitats, urban waters and habitats, and cross-watershed topics. During Day 2 participants were asked to rank draft management actions that came from a combination of day one conversation and findings and experts from each field related to the topics. Most everyone agreed with the suggestions that were given and found them to be feasible and impactful. However, participants did not rate the urban management actions as highly in terms of impact and feasibility.

Katie went through the science needs that were identified from the Day 2 workshop and the biggest thing that folks were interested in was quantifying BMP effectiveness and having cost data. Stream restoration was also a hot topic as participants were interested in having better knowledge on how different stream restoration designs impact what temperature.

Next steps for the information learned from the workshop include Steering Committee reviewing & synthesizing information, including management recommendations and associated science needs from synthesis papers and both workshop days, draft final report, and conducting outreach with Bay Program and partners to discuss strategies to implement the report's recommendations.

Renee then took the time to make the point out management actions that were suggested and how they are either directly related to metrics we already track in our tools like the CHWA or potential applications of how the CHWA could be used. She also noted that in some of the suggested management actions there is potential engagement and communication related to land use and protecting watersheds. There was a lot of overlap between the management actions suggested and our work being done with the HWGIT. We want to be able to help implement some of the recommendations that have come out of this workshop so that they are not just something shiny in a report but are applied in real life. Renee then posed the question: what are the next steps or opportunities for our goal team to help carry forward some of the recommendations?

Discussion

Scott Phillips: Over a year ago when this workshop was proposed the focus was on forests, but as the workshop progressed the biggest take away was protecting healthy watersheds, especially those cold-water areas. The conversation moved from restoration to a focus on conservation and protection.

Jeff Lerner: Can we go deeper and look at where the opportunities might be to do protection work? The state Forest Action Plans were all recently completed, many have a watershed forestry section. How

does that help encourage more protection within strategically identified watersheds and are they the same watersheds that we identified through our efforts? It also makes me think about stewardship, are there are some BMPs in terms of these larger landscape scale forestry practices that we are tacking. To what degree are the forest agencies already connected with what we are doing in terms of healthy watersheds?

Katie Brownson: We had lots of forestry agencies represented at the workshop but bringing them in into the healthy watershed conversation could be productive.

Jason Dubow: I am wondering if providing funding for local governments to develop changes to their local comprehensive plans to either integrate climate change issues relevant to this issue, or to just generally how to improve protection of healthy waters as towns develop would be productive. Recognizing the issues and getting money to hire consultants to help develop plans on behalf of local governments could be helpful as local governments might not have the staff time to make changes and address these specific issues

Jeff Lerner: I wonder if we could look to pre disaster mitigation program grants that FEMA gives out. If you look at protecting watersheds as a potential way to mitigate flooding issues you could be double dipping your grant to protect watersheds and communities in this day and age of climate change and need for resiliency.

Sally Claggett: This is a little different than the conversations I am hearing, but it is a lot of the same practices that we are always talking about, it lends itself to the policy push. I feel like we have enough research to push towards policy and creating comprehensive plans. I feel as if the time is right, and we can really communicate this and focus on the reasons for this work. There are many different funding streams out there. Rising temps have earned its own place for policy and states like MD have started to push forward with this work.

Monitoring Very-High Resolution Land Use/Land Cover Change (Progress status), Peter Claggett, USGS, Land Use Workgroup

Peter gave a brief update on the Land Use/Land Cover data and where it stands. He ran through the differences between land use and Land cover: land cover is the surface characteristics of the landscape and land use is the representation of the human activities happening on the landscape. The data will hopefully be released by the end of spring. The land cover is 12 classes while the land use is those 12 plus many more (as of right now 54 classes). When this new data comes out don't just pay attention to the resolution but also pay attention to the classification and think about how you might use this classification in your work. With the refinement of land use vs land cover, you get to better understand the landscape. Refinement of the data allows for you to determine if an area is forest vs small patches of trees vs trees over turf grass. You also get a tremendous amount of refinement in the low vegetation class. This data can help tell the story of the forest, the gains and losses and the undergoing succession of the forest.

There are 54 classes mapped for 2017/18 with more classes to be added for the 2021/22 data. There are 18 simplified classes instead of the 54 to better look at the data. The classes are really tree centric classifications which can help tell the story of forests. There will be data on impervious cover in 2017 and impervious cover change (2013-2017).

There will be a land use change viewer that will be permanent with the final data where people can go and type in any address and zoom in look at how peter and his team have mapped change from a layman's perspective. People can follow links from the site and download data. Downloaded data will most likely be at the county, state, and watershed scale.

Land use change matrices by county, state, and watershed will also be available to download. They will be able to in a nutshell tell you what is changing.

Soon there will be the first draft hyper-res streams data set (1:2000 scale) and the high-res hydrography layer. This will be turned into a new higher resolution riparian area data set, which will add many more stream miles.

Peter ended with some caveats: the data will be revised in the future when the 2021/22 is complete. 2017/18 and 2013/14 will also be revised and updated to ensure that classifications are consistent and that the change does not have a lot of noise. Sarah McDonald is going to be producing a back cast to try and take this high-resolution data at the parcel scale and back cast it to it at least the 1990 or maybe even the late 80s. There's potential to misuse the data. The biggest change across the landscape is timber harvest, most of which are going to come back and say that is a permanent loss of trees, which is not correct. So, the GIS team are releasing data with a lot of documentation associated with them, so you can really understand before you report values and information to managers. Peter also noted that the Maryland change period is 5 years instead of 4 years.

In Spring 2024 the 2021/22 data will be released along with the change from 2013/14 to 2017/18 to 2021/22. Post 2024 releases are dependent upon funding.